



**[4910-13]**

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 21**

**[Docket No. FAA-2001-8994; Amdt. No. 21-96]**

**RIN 2120-AK19**

**Type Certification Procedures for Changed Products**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule; disposition of comments.

**SUMMARY:** On December 4, 2012, the FAA published a final rule; request for comments (77 FR 71691) to make the existing regulation consistent with the FAA's intent and with the certification practice both before and after the adoption of the existing rule. The 2012 final rule clarifies what an applicant must show regarding a "changed product" to comply with applicable standards and became effective on February 4, 2013. We sought public comment on that final rule even though it is only clarifying in nature. This action responds to the public comments the FAA received.

**ADDRESSES:** You may review the public docket for this rulemaking (Docket No. FAA-2001-8994) at the Docket Management Facility in Room W12-140 of the West Building Ground Floor at 1200 New Jersey Avenue, SE., Washington, DC, 20590-0001 between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. You may also review the public docket on the Internet at <http://www.regulations.gov>.

**FOR FURTHER INFORMATION CONTACT:** For technical questions concerning this action, contact Victor Powell, Certification Procedures Office (AIR-110), Aircraft Certification

Service, Federal Aviation Administration, 950 L'Enfant Plaza SW, Washington DC 20024; telephone (202) 385-6326; e-mail [victor.powell@faa.gov](mailto:victor.powell@faa.gov), or Randall Petersen, Certification Procedures Office (AIR-110), Aircraft Certification Service, Federal Aviation Administration, 950 L'Enfant Plaza SW, Washington DC 20024; telephone (202) 385-6325, e-mail [randall.petersen@faa.gov](mailto:randall.petersen@faa.gov).

For legal questions concerning this action, contact Douglas Anderson, Northwest Mountain Region—Deputy Regional Counsel (ANM-7), Office of the Chief Counsel, Federal Aviation Administration Northwest Mountain Regional Office, 1601 Lind Ave., SW Renton, WA 98057; telephone (425) 227-2166; facsimile (425) 227-1007; e-mail [douglas.anderson@faa.gov](mailto:douglas.anderson@faa.gov).

## **SUPPLEMENTARY INFORMATION**

### **Background**

On June 7, 2000, the FAA published a final rule entitled, “Type Certification Procedures for Changed Products” (65 FR 36244). In that final rule, the FAA revised the procedural requirements for the certification of changes to type-certificated products. The revision required the applicant to apply the latest airworthiness standards in effect, to the extent practical, for the certification of significant design changes of aircraft, aircraft engines, and propellers. Before this final rule, many changes to aeronautical products were not required to show compliance with the latest airworthiness standards. This final rule was needed because incremental design approval changes accumulated into significant differences from the original product. Also, the final rule was intended to expand under what conditions the latest airworthiness amendments needed to be applied to changes to aeronautical products.

To clarify what the 2000 final rule intended, the FAA published a final rule; request for comments also entitled, “Type Certification Procedures for Changed Products” (December 4, 2012, 77 FR 71691). The 2000 final rule requires an applicant to show that the “changed product” complies with applicable standards. The purpose of § 21.101 is to require an applicant to evaluate the proposed design change and its effect on the product rather than the re-evaluation (certification) of the entire changed product. Therefore, § 21.101 was amended in the 2012 final rule to replace “changed product” with “change and areas affected by the change” to accurately limit the scope of compliance responsibility for the applicant. That change was also made in § 21.97 for the same reason. The intended effect of the 2012 final rule is to make the applicable requirements consistent with the FAA’s intent and with the certification practice both before and after the adoption of the 2000 final rule.

### **Discussion of Comments**

Two comments were received in the docket during the comment period for this final rule. The Boeing Company expressed concern with a possible increase in administrative burden of establishing the certification basis for changes it believes are significant at the product level. Transport Canada (TCCA) commented that it believes the final rule changes the significance of the assessment of the design change level relative to the entire product.

Boeing provided recommendations for changes to the preamble to the final rule regarding § 21.101 and to the final rule in general that it believes will reestablish and clarify the original intent of the regulation and concerns regarding the associated administrative burden to applicants. The FAA has considered Boeing’s concerns and has determined that Boeing’s recommendations need to be further evaluated before adoption. The FAA believes the original

intent of the 2012 final rule as published is acceptable for clarifying an applicant's responsibility for showing compliance for the change and the areas affected by the change.

TCCA suggested that the final rule now has the unintended consequence of allowing a design change to be evaluated at an area, system, component, equipment, or appliance level only, rather than at the product level. TCCA further suggested that the final rule may lead to an interpretation that multiple design changes could now be evaluated individually for their significance, instead of their total effect on the product. TCCA believes the final rule will put into question the interpretation of what a significant change is and recommends that the FAA reconsider the rendering of the final rule. TCCA noted that implementation of the final rule may disrupt the harmonized implementation of pertinent regulations and guidance material.

The FAA agrees that the evaluation of a proposed design change needs to be at the product level and considered the effect of the final rule as it applied to product level and the evaluation of changes. However, it appears TCCA may have misunderstood the purpose and effect of the amendment and, as a result, conflated two separate issues. The first issue is the scope of the requirement of § 21.101 to show compliance. Prior to the amendment, § 21.101(a) required that the "changed product" must be shown to meet applicable requirements in effect on the date of application. "Product" is defined in § 21.1 to mean "aircraft, aircraft engine, or propeller." Taken literally, the scope of the requirement to show compliance was the entire product, including the applicant's proposed change. In practice, applicants do not show that the entire product complies with applicable requirements; their compliance showings, and the FAA's findings, relate only to the proposed change and the areas affected by the change. The purpose of this amendment is simply to conform the wording of the rule to this long-standing practice.

The second issue is what requirements are applicable. Prior to this amendment, § 21.101(b) and (c) allowed the compliance showing to be made to earlier versions of the latest requirements if certain conditions are met. However, taken literally, these exceptions still required that the applicant show that the entire product complies at least with earlier versions of those requirements. Limiting the scope of this requirement eliminates the literal requirement to show compliance for areas not affected by the change.<sup>1</sup>

However, nothing in this amendment changes the exceptions in § 21.101(b) and (c) or the policies that have been developed for applying them. For example, the harmonized policy for determining whether a change is “significant” is that this evaluation is done at the “product level.” Under this amendment, this policy is unchanged. Similarly, precisely identifying the scope of an applicant’s obligation to show compliance does not affect the existing requirement of § 21.101(b)(1) that significance be evaluated in context with all previous relevant design changes. We continue to agree with TCCA’s view that “the contribution to safety and practicality principles of 14 CFR 21.101 are intended to target a measurable benefit at a product level.”

The FAA finds that the original intent of the existing changed product final rule to apply to the evaluation of the change’s particular effect on the total product level is maintained with

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<sup>1</sup> Even within “areas affected by the change,” there may be an “area, system, component, equipment, or appliance” that is not affected. Section 21.101(b)(2) allows applicants to show that these meet the requirements of earlier amendments. For example, in the preamble to the final rule, we cited the following example of “areas affected by the change”: “changing an airframe’s structure, such as adding a cargo door in one location, may affect the frame or floor loading in another area.” But even within these broad areas, an applicant may be able to show that certain portions of the area are not affected (e.g., wiring in the area may not be affected). As another example, if a passenger seat fitting is changed, the structure of the seat is affected, and thus §§ 25.561 and 25.562 would need to be addressed (and probably some other structural requirements). However, the seat fabric is not affected, so § 25.853 would not need to be addressed. This would allow the applicant to show that these sub-areas meet earlier versions of the applicable amendments.

this final rule. This rule is consistent with the preamble's goals and published guidance and is implemented as published on December 4, 2012.

## **Conclusion**

After analyzing the comments submitted in response to this final rule, the FAA has determined that further revisions to it are unnecessary at this time. This determination is based on our finding that this final rule is necessary because it addresses the concern that the wording of the requirement in the 2000 rule for a compliance showing was too broad for an applicant for a major design change. Again, this rulemaking only clarifies the original intent of the 2000 final rule and makes the applicable requirements reflect the reality of existing practice. This rulemaking is not a departure from or addition to what is already being done by an applicant for a compliance showing to the FAA in this regard.

Issued in Washington, DC on March 4, 2013.

Frank P. Paskiewicz  
Deputy Director, Aircraft Certification Service

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